According to another related invention, compounds of the formula X_5-Leu-Asp-X_7-SEQ ID NO:22-X_6, wherein SEQ ID NO:22 is the sequence Asn-Ala-Glu-Val-Tyr, and pharmaceutical compositions thereof are provided wherein

X_5 is from zero to twelve amino acids, more preferably from zero to six amino acids, most preferably from zero to three amino acids;

X_6 is from zero to twelve amino acids, more preferably from zero to six amino acids, most preferably from zero to three amino acids; and

X_7 is Ala or Cys.

Page 11, delete the paragraph spanning lines 29-33 and inset the following substitute paragraph:

"D3 peptide" means a peptide of the formula (a) X_1-SEQ ID NO:1-X_2, (b) X_3-SEQ ID NO:5-X_4, (c) X_5-Leu-Asp-X_7-SEQ ID NO:22-X_6 were X_1, X_2, X_3, X_4, X_5, X_6 and X_7 are defined above, or (d) peptide fragment (or analog thereof) of HK domain 3 which is active in inhibiting endothelial cell proliferation and/or inhibiting angiogenesis.

In the Sequence Listing:

Cancel the Sequence Listing and insert the substitute Sequence Listing submitted herewith in paper and electronic form.

In the Claims:

Cancel claims 9, 10 and 11 without prejudice.

Rewrite claims 1, 3-8, 12-15, 17-21, 23, 27, 29-32, 34-38, 40-43 and 45 to read as follows.

1. (amended) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a compound of the formula X_1-SEQ ID NO:1-X_2 wherein

X_1 is from zero to twelve amino acids, and

X_2 is from zero to twelve amino acids,

3. (amended) The composition of claim 1 wherein

X_1 is

(i) zero amino acids, or

(ii) the segment SEQ ID NO:2, or N-terminal truncation fragment thereof containing at least one amino acid, and

X_2 is

(i) zero amino acids, or

(ii) the segment SEQ ID NO:3, or C-terminal truncation fragment thereof containing at least one amino acid.

A4 cont

4. (amended) The composition of claim 1 wherein the compound has substantial amino acid sequence homology to the amino acid sequence SEQ ID NO:4.

5. (amended) The composition of claim 1 wherein the compound has the amino acid sequence SEQ ID NO:1.

6. (amended) The composition of claim 1 wherein the compound has the amino acid sequence SEQ ID NO:9.

7. (amended) The composition of claim 1 wherein the compound has the amino acid sequence SEQ ID NO:10.

8 (amended) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a compound of the amino acid sequence SEQ ID NO:5 or SEQ ID NO:11 wherein an internal disulfide bond between the cysteine residues of said compound is optionally present, and wherein said compound optionally comprises an amino-terminal and/or carboxy-terminal protecting group.

A5

12. (amended) The composition of claim 8 wherein the compound has the amino acid sequence SEQ ID NO:5.

13. (amended) The composition of claim 8 wherein the compound has the amino acid sequence SEQ ID NO:11.

14. (amended) The composition of any of claims 8, 12 or 13 wherein a disulfide bond between the cysteine residues of the compound is present.

A5 cont

15. (amended) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a compound of the formula X_5-Leu-Asp-X_7-SEQ ID NO:22-X_6 wherein

X_5 is from zero to twelve amino acids,

X_6 is from zero to twelve amino acids, and

X_7 is Ala or Cys,

and wherein said compound optionally comprises an amino-terminal and/or carboxy-terminal protecting group.

17. (amended) The composition of claim 15 wherein

X_5 is

(i) zero amino acids, or

(ii) the segment SEQ ID NO:13, or N-terminal truncation fragment thereof containing at least one amino acid, and

A6

X_6 is

(i) zero amino acids, or

(ii) the segment SEQ ID NO:14, or C-terminal truncation fragment thereof containing at least one amino acid.

18. (amended) The composition of claim 15 wherein the compound has substantial amino acid sequence homology to the amino acid sequence SEQ ID NO:17.

19. (amended) The composition of claim 15 wherein the compound has the amino acid

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sequence SEQ ID NO:12.

20. (amended) The composition of claim 15 wherein the compound has the amino acid sequence SEQ ID NO:15.

21. (amended) The composition of claim 15 wherein the compound has the amino acid sequence SEQ ID NO:16.

23. (amended) The composition according to claim 22 wherein the peptide fragment or analog has the amino acid sequence SEQ ID NO:19 or SEQ ID NO:20.

27. (amended) A method of inhibiting endothelial cell proliferation comprising contacting endothelial cells with a compound of the formula X_1-SEQ ID NO:1-X_2 wherein

X_1 is from zero to twelve amino acids, and

X_2 is from zero to twelve amino acids,

and wherein said compound optionally comprises an amino-terminal and/or carboxy-terminal protecting group.

29. (amended) The method of claim 27 wherein

X_1 is

(i) zero amino acids, or

(ii) the segment SEQ ID NO:2, or N-terminal truncation fragment thereof containing at least one amino acid, and

X_2 is

(i) zero amino acids, or

(ii) the segment SEQ ID NO:3, or C-terminal truncation fragment thereof containing at least one amino acid.

30. (amended) The method of claim 27 wherein the compound has the amino acid sequence SEQ ID NO:9.

31. (amended) The method of claim 27 wherein the compound has the amino acid sequence SEQ ID NO:10.

32. (amended) A method of inhibiting endothelial cell proliferation comprising contacting endothelial cells with a compound of the formula X_3-SEQ ID NO:5-X_4 wherein

X_3 is from zero to twelve amino acids, and
X_4 is from zero to twelve amino acids,

wherein a disulfide bond between the cysteine residues of the segment SEQ ID NO:5 is optionally present, and wherein said compound optionally comprises an amino-terminal and/or carboxy-terminal protecting group.

34. (amended) The method of claim 32 wherein

X_3 is

(i) zero amino acids, or

(ii) the segment SEQ ID NO:6, or N-terminal truncation fragment thereof containing at least one amino acid, and

X_4 is

(i) zero amino acids, or

(ii) the segment SEQ ID NO:7, or C-terminal truncation fragment thereof containing at least one amino acid.

35. (amended) The method of claim 32 wherein the compound has the amino acid sequence SEQ ID NO:5.

36. (amended) The method of claim 32 wherein the compound has the amino acid sequence SEQ ID NO:11.

37. (amended) The method of any of claims 32-36 wherein a disulfide bond between the cysteine residues of the segment SEQ ID NO:5 of said compound is present.

38. (amended) A method of inhibiting endothelial cell proliferation comprising contacting endothelial cells with a compound of the formula X_5-Leu-Asp-X_7-SEQ ID NO:22-X_6 wherein

A 10 cont

X_5 is from zero to twelve amino acids,
X_6 is from zero to twelve amino acids, and
X_7 is Ala or Cys.

and wherein said compound optionally comprises an amino-terminal and/or carboxy-terminal protecting group.

40. (amended) The method of claim 38 wherein

A 11

X_5 is

(i) zero amino acids, or

(ii) the segment SEQ ID NO:13, or N-terminal truncation fragment thereof containing at least one amino acid, and

X_6 is

(i) zero amino acids, or

(ii) the segment SEQ ID NO:14, or C-terminal truncation fragment thereof containing at least one amino acid.

41. (amended) The method of claim 38 wherein the compound has the amino acid

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